

Module completeness

1

0.5

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M00001_1					Central carbohydrate metabolism	Glycolysis (Embden–Meyerhof pathway), glucose => pyruvate
M00002_1					Central carbohydrate metabolism	Glycolysis, core module, coving three-carbon compounds
M00003_1					Central carbohydrate metabolism	Gluconeogenesis, oxaloacetate => fructose-6P
M000307_1					Central carbohydrate metabolism	Pyruvate oxidation, pyruvate => acetyl-CoA
M00009_1					Central carbohydrate metabolism	Citrate cycle (TCA cycle, Krebs cycle)
M00010_1					Central carbohydrate metabolism	Citrate cycle, first carbon oxidation, oxaloacetate => 2-oxoglutarate
M00011_1					Central carbohydrate metabolism	Citrate cycle, second carbon oxidation, 2-oxoglutarate => oxaloacetate
M00004_1					Central carbohydrate metabolism	Pentose phosphate pathway (Pentose phosphate cycle)
M00006_1					Central carbohydrate metabolism	Pentose phosphate pathway, oxidative phase, glucose 6P => ribulose 5P
M00007_1					Central carbohydrate metabolism	Pentose phosphate pathway, non-oxidative phase, fructose 6P => ribose 5P
M000580_1					Central carbohydrate metabolism	Pentose phosphate pathway, archaea, fructose 6P => ribose 5P
M000005_1					Central carbohydrate metabolism	PRPP biosynthesis, ribose 5P => PRPP
M000008_1					Central carbohydrate metabolism	Entner–Doudoroff pathway, glucose-6P => glyceraldehyde-3P + pyruvate
M000308_1					Central carbohydrate metabolism	Semi-phosphorylative Entner–Doudoroff pathway, gluconate => glycerate-3P
M00014_1					Other carbohydrate metabolism	Glucuronate pathway (uronate pathway)
M000630_1					Other carbohydrate metabolism	D-Galacturonate degradation (fungi), D-galacturonate => glycerol
M00081_1					Other carbohydrate metabolism	Pectin degradation
M000632_1					Other carbohydrate metabolism	Galactose degradation, Leloir pathway, galactose => alpha-D-glucose-1P
M000552_1					Other carbohydrate metabolism	D-galactonate degradation, De Lev–Doudoroff pathway, D-galactonate => glycerate-3P
M00129_1					Other carbohydrate metabolism	Ascorbate biosynthesis, animals, glucose-1P => ascorbate
M00114_1					Other carbohydrate metabolism	Ascorbate biosynthesis, plants, fructose-6P => ascorbate
M000854_1					Other carbohydrate metabolism	Glycogen biosynthesis, glucose-1P => glycogen/starch
M000855_1					Other carbohydrate metabolism	Glycogen degradation, glycogen => glucose-6P
M000565_1					Other carbohydrate metabolism	Trehalose biosynthesis, D-glucose 1P => trehalose
M000549_1					Other carbohydrate metabolism	Nucleotide sugar biosynthesis, glucose => UDP-glucose
M000554_1					Other carbohydrate metabolism	Nucleotide sugar biosynthesis, galactose => UDP-galactose
M000892_1					Other carbohydrate metabolism	UDP-N-acetyl-D-glucosamine biosynthesis, eukaryotes, glucose => UDP-GlcNAc
M000909_1					Other carbohydrate metabolism	UDP-N-acetyl-D-glucosamine biosynthesis, prokaryotes, glucose => UDP-GlcNAc
M000012_1					Other carbohydrate metabolism	Glyoxylate cycle
M000373_1					Other carbohydrate metabolism	Ethylmalonyl pathway
M000740_1					Other carbohydrate metabolism	Methylaspartate cycle
M000532_1					Other carbohydrate metabolism	Photorespiration
M000532_1					Other carbohydrate metabolism	Malonate semialdehyde pathway, propanoyl-CoA => acetyl-CoA
M000013_1					Other carbohydrate metabolism	Phototranspiration
M00130_1					Other carbohydrate metabolism	Inositol phosphate metabolism, PI => PIP2 => Ins(1,4,5)P3 => Ins(1,3,4,5)P4
M00131_1					Other carbohydrate metabolism	Inositol phosphate metabolism, Ins(1,3,4,5)P4 => Ins(1,3,4)P3 => myo-inositol
M00132_1					Other carbohydrate metabolism	Inositol phosphate metabolism, Ins(1,3,4)P3 => phytate
M00165_1					Carbon fixation	Reductive pentose phosphate cycle (Calvin cycle)
M00168_1					Carbon fixation	CAM (Crassulacean acid metabolism), dark
M00169_1					Carbon fixation	CAM (Crassulacean acid metabolism), light
M00172_1					Carbon fixation	C4-dicarboxylic acid cycle, NADP - malic enzyme type
M00171_1					Carbon fixation	C4-dicarboxylic acid cycle, NAD - malic enzyme type
M00170_1					Carbon fixation	C4-dicarboxylic acid cycle, phosphoenolpyruvate carboxykinase type
M00173_1					Carbon fixation	Reductive citrate cycle (Arnon–Buchanan cycle)
M000376_1					Carbon fixation	3-Hydroxypropionate bi-cycle
M000375_1					Carbon fixation	Hydroxypropionate-hydroxybutyrate cycle
M000374_1					Carbon fixation	Dicarboxylate-hydroxybutyrate cycle
M000377_1					Carbon fixation	Reductive acetyl-CoA pathway (Wood–Ljungdahl pathway)
M000579_1					Carbon fixation	Phosphate acetyltransferase-acetate kinase pathway, acetyl-CoA => acetate
M000357_1					Methane metabolism	Methanogenesis, acetate => methane
M000346_1					Methane metabolism	Formaldehyde assimilation, serine pathway
M000345_1					Methane metabolism	Formaldehyde assimilation, ribulose monophosphate pathway
M000344_1					Methane metabolism	Formaldehyde assimilation, xylulose monophosphate pathway
M000531_1					Nitrogen metabolism	Assimilatory nitrate reduction, nitrate => ammonia
M00176_1					Sulfur metabolism	Assimilatory sulfate reduction, sulfate => H2S
M000586_1					Sulfur metabolism	Dissimilatory sulfate reduction, sulfate => H2S
M00143_1					ATP synthesis	NADH dehydrogenase (ubiquinone) Fe-S protein/flavoprotein complex, mitochondria
M00148_1					ATP synthesis	Succinate dehydrogenase (ubiquinone)
M00082_1					Fatty acid metabolism	Fatty acid biosynthesis, initiation
M00083_1					Fatty acid metabolism	Fatty acid biosynthesis, elongation
M000873_1					Fatty acid metabolism	Fatty acid biosynthesis in mitochondria, animals
M000874_1					Fatty acid metabolism	Fatty acid biosynthesis in mitochondria, fungi
M00085_1					Fatty acid metabolism	Fatty acid elongation in mitochondria
M000415_1					Fatty acid metabolism	Fatty acid elongation in endoplasmic reticulum
M000086_1					Fatty acid metabolism	β-oxidation, acyl-CoA synthesis
M000087_1					Fatty acid metabolism	β-oxidation
M000861_1					Fatty acid metabolism	β-oxidation, peroxisome, VLCFA
M00101_1					Sterol biosynthesis	Cholesterol biosynthesis, FPP => cholesterol
M00102_1					Sterol biosynthesis	Ergocalciferol biosynthesis, FPP => ergosterol/ergocalciferol
M000917_1					Sterol biosynthesis	Phytosterol biosynthesis, squalene 2,3-epoxide => campesterol/sitosterol
M000917_2					Sterol biosynthesis	Phytosterol biosynthesis, squalene 2,3-epoxide => campesterol/sitosterol
M00104_1					Sterol biosynthesis	Bile acid biosynthesis, cholesterol => cholate/chenodeoxycholate
M000862_1					Sterol biosynthesis	β-oxidation, peroxisome, trihydroxycholestanoyl-CoA => choloyl/chenodeoxycholoyl-CoA
M000976_1					Sterol biosynthesis	C19-Steroid hormone biosynthesis, pregnenolone => testosterone => dihydrotestosterone
M00088_2					Lipid metabolism	Ketone body biosynthesis, acetyl-CoA => acetoacetate/3-hydroxybutyrate/acetone
M00088_2					Lipid metabolism	Ketone body biosynthesis, acetyl-CoA => acetoacetate/3-hydroxybutyrate/acetone
M00089_1					Lipid metabolism	Triacylglycerol biosynthesis
M00098_1					Lipid metabolism	Acylglycerol degradation
M00090_1					Lipid metabolism	Phosphatidylcholine (PC) biosynthesis, choline => PC
M00091_1					Lipid metabolism	Phosphatidylcholine (PC) biosynthesis, PE => PC
M00092_1					Lipid metabolism	Phosphatidylethanolamine (PE) biosynthesis, ethanolamine => PE
M00093_1					Lipid metabolism	Phosphatidylethanolamine (PE) biosynthesis, PA => PS => PE
M00094_1					Lipid metabolism	Ceramide biosynthesis
M00066_1					Lipid metabolism	Lactosylceramide biosynthesis
M00099_1					Lipid metabolism	Sphingosine biosynthesis
M00100_1					Lipid metabolism	Sphingosine degradation
M00110_1					Lipid metabolism	Jasmonic acid biosynthesis
M00048_1					Purine metabolism	De novo purine biosynthesis, PRPP + glutamine => IMP
M00049_1					Purine metabolism	Adenine ribonucleotide biosynthesis, IMP => ADP/ATP
M00050_1					Purine metabolism	Guanine ribonucleotide biosynthesis, IMP => GDP/GTP
M00053_1					Purine metabolism	Deoxyribonucleotide biosynthesis, ADP/GDP/CDP/UDP => dATP/dGTP/dCTP/dUTP
M000958_1					Purine metabolism	Isoleucine ribonucleotide degradation, AMP => Urate
M000959_1					Purine metabolism	Guanine ribonucleotide degradation, GMP => Urate
M000546_1					Purine metabolism	Purine degradation, xanthine => urea
M00051_1					Pyrimidine metabolism	De novo pyrimidine biosynthesis, glutamine (+ PRPP) => UMP
M00052_1					Pyrimidine metabolism	Pyrimidine ribonucleotide biosynthesis, UMP => UDP/UTP/CDP/CTP
M000938_1					Pyrimidine metabolism	Pyrimidine deoxyribonucleotide biosynthesis, UDP => dTTP
M00046_1					Pyrimidine metabolism	Pyrimidine degradation, uracil => β-alanine, thymine => 3-aminoisobutanoate
M000939_1					Pyrimidine metabolism	Pyrimidine degradation, uracil => 3-hydroxypropanoate
M00020_1					Serine and threonine metabolism	Serine biosynthesis, glycinate-3P => serine
M00018_1					Serine and threonine metabolism	Threonine biosynthesis, aspartate => homoserine => threonine
M000621_1					Serine and threonine metabolism	Glycine cleavage system
M000974_1					Serine and threonine metabolism	Betaine metabolism, animals, betaine => glycine
M000974_2					Serine and threonine metabolism	Betaine degradation, bacteria, betaine => pyruvate
M000033_1					Serine and threonine metabolism	Ectoine biosynthesis, aspartate => ectoine
M00021_1					Cysteine and methionine metabolism	Cysteine biosynthesis, serine => cysteine
M000338_1					Cysteine and methionine metabolism	Cysteine biosynthesis, homocysteine + serine => cysteine
M000609_1					Cysteine and methionine metabolism	Cysteine biosynthesis, methionine => cysteine
M00011_1					Cysteine and methionine metabolism	Methionine biosynthesis, aspartate => homoserine => methionine
M000034_1					Cysteine and methionine metabolism	Methionine salvage pathway
M000035_1					Cysteine and methionine metabolism	Methionine degradation
M000368_1					Cysteine and methionine metabolism	Ethylene biosynthesis, methionine => ethylene
M000019_1					Branched-chain amino acid metabolism	Valine/isoleucine biosynthesis, pyruvate => valine / 2-oxobutanoate => isoleucine
M000535_1					Branched-chain amino acid metabolism	Isoleucine biosynthesis, pyruvate => 2-oxobutanoate
M000536_1					Branched-chain amino acid metabolism	Isoleucine biosynthesis, plants and bacteria, GTP => riboflavin/FMN/FAD
M000432_1					Branched-chain amino acid metabolism	Leucine biosynthesis, 2-oxoisovalerate => 2-oxoisocaproate
M000036_1					Branched-chain amino acid metabolism	Leucine degradation, leucine => acetoacetate + acetyl-CoA
M000016_1					Lysine metabolism	Lysine biosynthesis, succinyl-DAP pathway, aspartate => lysine
M000525_1					Lysine metabolism	Lysine biosynthesis, acetyl-DAP pathway, aspartate => lysine
M000529_1					Lysine metabolism	Lysine biosynthesis, D-lysine dehydrogenase pathway, aspartate => lysine
M000529_2					Lysine metabolism	Lysine biosynthesis, DAP aminotransferase pathway, aspartate => lysine
M000030_1					Lysine metabolism	Lysine biosynthesis, AAA pathway, 2-oxoglutarate => 2-aminoadipate => lysine
M000433_1					Lysine metabolism	Lysine biosynthesis, 2-oxoglutarate => 2-oxoadipate
M000032_1					Lysine metabolism	Lysine degradation, lysine => saccharopine => acetoacetyl-CoA
M000957_1					Lysine metabolism	Lysine degradation, bacteria, L-lysine => glutarate => succinate/acetyl-CoA
M00028_1					Arginine and proline metabolism	Ornithine biosynthesis, glutamate => ornithine
M000844_1					Arginine and proline metabolism	Arginine biosynthesis, ornithine => arginine
M000845_1					Arginine and proline metabolism	Arginine biosynthesis, glutamate => acetylglutulline => arginine
M00029_1					Arginine and proline metabolism	Urea cycle
M000015_1					Arginine and proline metabolism	Proline biosynthesis, glutamate => proline
M000970_1					Arginine and proline metabolism	Proline degradation, proline => glutamate
M000972_1					Arginine and proline metabolism	Proline metabolism
M00133_1					Polyamine biosynthesis	Polyamine biosynthesis, arginine => agmatine => putrescine => spermidine
M00133_2					Polyamine biosynthesis	Polyamine biosynthesis, arginine => agmatine => putrescine => spermidine
M00134_2					Polyamine biosynthesis	Polyamine biosynthesis, arginine => agmatine => putrescine => spermidine
M00134_1					Polyamine biosynthesis	Polyamine biosynthesis, arginine => ornithine => putrescine
M00135_1					Polyamine biosynthesis	GABA biosynthesis, eukaryotes, putrescine => GABA
M00026_1					Histidine metabolism	Histidine biosynthesis, PRPP => histidine
M00022_1					Aromatic amino acid metabolism	Shikimate pathway, phosphoenolpyruvate + erythrose-4P => chorismate
M00023_1					Aromatic amino acid metabolism	Tryptophan biosynthesis, chorismate => tryptophan
M00024_1					Aromatic amino acid metabolism	Phenylalanine biosynthesis, chorismate => phenylpyruvate => phenylalanine
M000910_1					Aromatic amino acid metabolism	Phenylalanine biosynthesis, chorismate => argentine => phenylalanine
M000025_1					Aromatic amino acid metabolism	Tyrosine biosynthesis, chorismate => HPP => tyrosine
M00040_1					Aromatic amino acid metabolism	Tyrosine biosynthesis, chorismate => argentine => tyrosine
M00042_1					Aromatic amino acid metabolism	Catecholamine biosynthesis, tyrosine => dopamine => noradrenaline => adrenaline
M00044_1					Aromatic amino acid metabolism	Tyrosine degradation, tyrosine => homogentisate
M000037_1					Aromatic amino acid metabolism	Melatonin biosynthesis, animals, tryptophan => serotonin => melatonin
M000936_1					Aromatic amino acid metabolism	Melatonin biosynthesis, plants, tryptophan => serotonin => melatonin
M000038_1					Aromatic amino acid metabolism	Tryptophan metabolism, tryptophan => kynurenine => 2-aminomuconate
M000027_1					Other amino acid metabolism	GABA (gamma-Aminobutyrate) shunt
M00118_1					Other amino acid metabolism	Glutathione biosynthesis, glutamate => glutathione
M000055_1					Glycan biosynthesis	N-glycan precursor biosynthesis
M00072_1					Glycan biosynthesis	N-glycan glycosylation by oligosaccharyltransferase
M00073_1					Glycan biosynthesis	N-glycan precursor trimming
M00074_1					Glycan biosynthesis	N-glycan biosynthesis, high-mannose type
M00075_2					Glycan biosynthesis	N-glycan biosynthesis, complex type
M00075_1					Glycan biosynthesis	N-glycan biosynthesis, mannose type (core M3)
M00065_1					Glycan biosynthesis	GPI-anchor biosynthesis, core oligosaccharide
M00076_1					Glycosaminoglycan metabolism	Dermatan sulfate degradation
M00077_1					Glycosaminoglycan metabolism	Chondroitin sulfate degradation
M00078_1					Glycosaminoglycan metabolism	Heparan sulfate degradation
M00079_1					Glycosaminoglycan metabolism	Keratan sulfate degradation
M00063_1					Lipopolysaccharide metabolism	CMP-KDO biosynthesis
M00127_3					Cofactor and vitamin metabolism	Thiamine biosynthesis, prokaryotes, AIR (+ DXP/tyrosine) => TMP/TPP
M000895_1					Cofactor and vitamin metabolism	Thiamine biosynthesis, prokaryotes, AIR (+ DXP/glycine) => TMP/TPP
M000895_2					Cofactor and vitamin metabolism	Thiamine biosynthesis, archaea, AIR (+ NAD+) => TMP/TPP
M000897_1					Cofactor and vitamin metabolism	Thiamine biosynthesis, plants, AIR (+ NAD+) => TMP/thiamine/TPP
M000897_2					Cofactor and vitamin metabolism	Thiamine biosynthesis, plants, AIR (+ NAD+) => TMP/thiamine/TPP
M000898_1					Cofactor and vitamin metabolism	Thiamine biosynthesis, pyridoxal-5P => TMP/thiamine/TPP
M000898_2					Cofactor and vitamin metabolism	Thiamine biosynthesis, pyridoxal-5P => TMP/thiamine/TPP
M000899_1					Cofactor and vitamin metabolism	Thiamine salvage pathway, HMP/HET => TMP
M000899_2					Cofactor and vitamin metabolism	Thiamine salvage pathway, HMP/HET => TMP
M00125_1					Cofactor and vitamin metabolism	Riboflavin biosynthesis, plants and bacteria, GTP => riboflavin/FMN/FAD
M00125_2					Cofactor and vitamin metabolism	Riboflavin biosynthesis, plants and bacteria, GTP => riboflavin/FMN/FAD
M00125_3					Cofactor and vitamin metabolism	Riboflavin biosynthesis, plants and bacteria, GTP => riboflavin/FMN/FAD
M000911_1					Cofactor and vitamin metabolism	Riboflavin biosynthesis, fungi, GTP => riboflavin/FMN/FAD
M000911_2					Cofactor and vitamin metabolism	Riboflavin biosynthesis, fungi, GTP => riboflavin/FMN/FAD
M000912_1					Cofactor and vitamin metabolism	Riboflavin biosynthesis, fungi, GTP => riboflavin/FMN/FAD
M000912_2					Cofactor and vitamin metabolism	Riboflavin biosynthesis, fungi, GTP => riboflavin/FMN/FAD
M000916_1					Cofactor and vitamin metabolism	Pyridoxal-P biosynthesis, erythrose-4P => pyridoxal-P
M00115_1					Cofactor and vitamin metabolism	Pyridoxal-P biosynthesis, R5P + glyceraldehyde-3P + glutamine => pyridoxal-P
M000912_1					Cofactor and vitamin metabolism	NAD biosynthesis, aspartate => quinolinate => NAD
M000912_2					Cofactor and vitamin metabolism	NAD biosynthesis, tryptophan => quinolinate => NAD
M00119_1					Cofactor and vitamin metabolism	Nicotinate degradation, nicotinate => fumarate
M00119_2					Cofactor and vitamin metabolism	Pantothenate biosynthesis, valine/L-aspartate => pantothenate
M000913_1					Cofactor and vitamin metabolism	Pantothenate biosynthesis, valine/L-aspartate => pantothenate
M000913_2					Cofactor and vitamin metabolism	Pantothenate biosynthesis, 2-oxoisovalerate/spermine => pantothenate
M000913_3					Cofactor and vitamin metabolism	Pantothenate biosynthesis, 2-oxoisovalerate/spermine => pantothenate
M000913_4					Cofactor and vitamin metabolism	Pantothenate biosynthesis, 2-oxoisovalerate/spermine => pantothenate
M00120_1					Cofactor and vitamin metabolism	Coenzyme A biosynthesis, pantothenate => CoA
M000914_1					Cofactor and vitamin metabolism	Coenzyme A biosynthesis, archaea, 2-oxoisovalerate => 4-phosphopantoate => CoA
M000572_1					Cofactor and vitamin metabolism	Biotin biosynthesis, BioU pathway, malonyl-ACP => pimeloyl-ACP
M000123_1					Cofactor and vitamin metabolism	Biotin biosynthesis, pimeloyl-ACP/CoA => biotin
M000950_1					Cofactor and vitamin metabolism	Biotin biosynthesis